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FLUOR DANIEL GTI

October 19, 1998

Mr. Ralph Dollhopf
On-Scene Coordinator
United States Environmental Protection Agency
9311 Groh Road
Room 216
Grosse Ile, Michigan 48138

RE: South Green Avenue Site
Detroit, Michigan

Dear Mr. Dollhopf:

On October 7, 1998, a meeting was held among Michigan Consolidated Gas Company (MichCon), the U.S. EPA, Fluor Daniel GTI and Ecology and Environment, Inc. (E & E). The purpose of this meeting was to discuss the *Draft Work Plan for Conducting an Environmental Assessment to Support an Engineering Evaluation/Cost Analysis* dated September 8, 1998 (subsequently referred to as the "Draft Work Plan") and the *Draft Health and Safety Plan* dated July 17, 1998 that pertained to the above-referenced site. During this meeting the U.S. EPA provided verbal comments on the Draft Work Plan and E & E provided written comments in an October 6, 1998 memorandum to the U.S. EPA. Responses to the U.S. EPA's and E & E's comments are presented below. The work plan has been revised (subsequently referred to as the "Revised Draft Work Plan") to address these comments and the revised plan is enclosed. E & E also provided written comments on the July 17, 1998 Draft Health and Safety Plan in their September 28, 1998 memorandum to the U.S. EPA. Responses to E & E's comments on the safety plan are also presented below. A revised draft of the safety plan (subsequently referred to as "Revised Draft Safety Plan") is enclosed.

WORK PLAN FOR CONDUCTING AN ENVIRONMENTAL ASSESSMENT

U.S. EPA COMMENTS

A summary of the U.S. EPA's verbal comments is presented below in bold italics followed by responses.

#1 Suggested procedures to investigate the presence of MGP wastes are test pits, sampling grids and/or field analytical techniques.

Test pits were not included in the Draft Work Plan since the City of Detroit access agreement specified that test pit areas were to be backfilled with clean engineered fill compacted to 95% proctor. During the October 7, 1998 meeting, the City of Detroit was contacted and approval was provided to excavate test pits with all excavated materials being left in place. Therefore, test pits are included as Section 3.3 of the Revised Draft Work Plan.

As discussed in Section 3.3 of the Revised Work Plan, a sampling grid was established according to the Michigan Department of Environmental Quality (MDEQ)'s *Verification of Soil Remediation Guidance Document* (April 1994). The sampling grid was used to randomly select test pits areas.

Field analytical techniques are not included in the Revised Work Plan since the environmental assessment work scope presented in the Revised Draft Work Plan, consisting of test pits, soil borings and monitoring wells, extensively covers the site.

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#2 The high school located southeast of the site should be considered as a potential receptor.

As stated in Section 2.6 of the Revised Work Plan, high school receptors are included as potential residential receptors, only if off-site migration of contaminants is indicated. As stated in this section, a detailed exposure assessment will be conducted as part of the Engineering Evaluation/Cost Analysis (EE/CA).

#3 The work plan should address site security.

Section 7.0 of the Revised Work Plan addresses site security measures to be undertaken by MichCon.

#4 Aerial photographs should be provided to the U.S. EPA for review.

The available aerial photographs will be provided to the U.S. EPA.

#5 An activity specific schedule should be included in the work plan.

A detailed schedule will be provided to the U.S. EPA once the approval date of the work plan is known.

#6 The work plan should state that the remedy will be implemented after the completion of the EE/CA.

Section 5.0 of the Revised Work Plan states that the approved removal cleanup alternative will be implemented after the EE/CA has been approved by the U.S. EPA.

E & E's COMMENTS

E & E's comments are presented below in bold italics followed by the responses.

Page 2, Section 2.1.2.1: Describe the physical dimensions, characteristics and use of the tar well located in the western corner of the site in the vicinity of HA-2, HA-3 and W-2.

The physical dimensions, characteristics and use of the two tar wells located in the western corner of the site are not known. Section 3.3 of the Revised Work Plan specifies that test pits will be excavated at the tar well locations. Additional information regarding the tar wells will be available after the test pit investigation is completed.

Page 2, Section 2.1.2.1: How deep do the gas holder foundations extend (or typically extend, if not site specific information is available) below the ground surface?

The depths of the gas holder foundations are not known. Test pits will be excavated at the two gas holder locations. Additional information regarding the gas holder foundations will be available after the test pit investigation is completed.

Page 6, Section 2.4: Which way does surface topography slope? Could be helpful in determining surface sampling and evaluating exposure pathways.

The surface topography is relatively flat.

Page 6, Section 2.5: Can a gradient and ground water flow rate be determined from the EDI data. Add some discussion of the geology/hydrogeology below the clay layer. The gas holder foundations may extend through the clay layer and often contain substantial quantities of coal tar and cyanide residues that could be sources of contamination releases to deeper geologic/hydrogeologic formations.

A discussion of the geology/hydrogeology below the clay is included in Section 2.4 of the Revised Draft Work Plan. As stated in this section, according to two drilling logs of industrial wells located approximately two (2) miles northwest of the site, clay directly overlies bedrock that was encountered at 80 feet and 115 feet below the surface. The environmental assessment included in the Revised Draft Work Plan will provide information regarding the thickness of the clay and the gas holder foundations.

Page 7, Section 2.6: When was the fencing put in? What kind of site monitoring program is in place to make sure that security of the fence is intact? There was some vandalism done to the site in the past where the fence was taken down. If a site is relatively close to a residential area, like this site, and it is not occupied or guarded, it is difficult to exclude trespassers/visitors as potential receptors.

The fencing was installed by the U.S. EPA in the summer of 1998. Site security measures are discussed in Section 7.0 of the Revised Draft Work Plan. Section 2.6 of the Revised Draft Work Plan includes trespassers as a potential receptor (only if the fence is breached).

Page 7, Section 2.6: "A list of potential exposure pathways is as follows:", it should be "A list of potential transport mechanisms is as follows:" The exposure evaluation should include sources. A potential exposure pathway Conceptual Site Model may be helpful.

As stated in Section 2.6 of the Draft Work Plan, the exposure assessment presented in the Draft Work Plan was preliminary. A detailed evaluation of exposure pathways will be conducted as part of the EE/CA.

Page 7, Section 2.6: How is a utility worker a potential receptor? There are no utilities shown on the figures. There are no mention of utilities in the report. There is no mention of evaluating the potential migration and impact of contaminants to the utilities.

Based on the assumption that the site may be developed in the future, a utility worker is a future potential receptor. The only known utility line present on the site is the water line shown on Figure 2 in the Revised Draft Work Plan. The potential migration and impact of contaminants to this utility line will be addressed through the installation of proposed monitoring well MW-5. The test pit investigation may also provide information regarding the potential impacts to this utility line. If other utility lines are identified in the future, they will be evaluated as potential migration pathways.

Page 8, Section 2.7.1: Were the EDI soil and ground water samples analyzed for the full suite TCLP volatile and semi-volatile organics and phenols, or just for BTEX, PAHs, and phthalates? Please clarify. If none of the previous samples were analyzed for the full suite of TCLP/TAL chemicals, some of the proposed samples should be analyzed for the full suite to adequately characterize the site.

TCLP analysis was not conducted on soil and groundwater samples as part of the EDI investigation.

As stated in Section 2.2.1.1 of the Revised Draft Work Plan, the EDI investigation included the analysis of soil and groundwater samples for 33 volatile organic compounds (VOCs) (EPA Method 624) and 47 base-neutral fraction compounds (EPA Method 625), 13 metals, cyanide (total and amendable) and total phenol.

The EDI analyses included 26 of the 33 Target Compound List (TCL) VOCs. The only VOCs detected in the soil and groundwater were BTEX (only VOCs typically encountered at MGP sites). The analysis of BTEX in soils and groundwater is included as part of the proposed environmental assessment. Analyzing additional VOCs is not warranted.

The EDI anlayses included 43 of the 66 TCL semi-volatile compounds (SVOCs). The only SVOCs detected were polynuclear aromatic hydrocarbons (PAHs) (only SVOCs typically encountered at MGP sites) and phthalates (typically not associated with MGP operations). The proposed environmental assessment includes the analysis of PAHs and phthalates (even though not associated with MGP operations). Including additional SVOCs is not warranted.

Fourteen of the 24 TCL inorganics were included as part of the EDI investigation. Since the inorganic analyses proposed in the environmental assessment were based on the EDI analytical results and information in the Administrative Order by Consent (AOC), including additional inorganic analyses is not warranted.

The TCL includes pesticides. Pesticides are not associated with MGP operations and, therefore, are not included as part of the proposed investigation.

Page 8, Section 2.7.1.5: The industrial generic cleanup criteria may not consider, and may not be adequately protective for construction or utility workers working in trenches where cyanide wastes are present. This should be noted in the work plan and fully evaluated in the screening risk evaluation included in the EE/CA. The high proportion of amenable cyanide in samples of the cyanide waste indicates that the waste material is in equilibrium with free cyanide ions and hydrogen cyanide gas which might accumulate in trenches and excavations and could pose and acute hazard to construction or utility workers working in these areas.

The exposure assessment presented in the Draft Work Plan was preliminary. A detailed evaluation of exposure pathways and appropriate cleanup criteria will be conducted as part of the EE/CA.

Page 10, Section 3.2: Should provide some key points and issues to each of the procedures listed. Should reference and provide a copy of Fluor Daniel Standard Operation Procedures.

Section 3.2 of the Revised Draft Work Plan provides additional information on the QA/QC procedures.

Page 11, Section 3.3: Section states that surface samples will be collected from 0 to 1 foot while Table 4 says they will be collected from 0.5 to 1 foot. Resolve discrepancy. More true surface samples (10 or more) are needed to adequately characterize potential soil exposures under existing site conditions. These samples should be collected from areas of exposed soil (not from beneath paving or impenetrable surfaces) and should be collected from the top 1 to 2 inches of soil in these areas. "Surface samples" collected from 0 to 1 foot or 0.5 to 1 foot do not adequately represent true surface soil conditions. In most cases, volatile chemicals will have long since evaporated from true

surface soil, so analysis of volatiles in these samples in not an important consideration.

As stated in Section 3.4.1 and in Table 4 of the Revised Draft Work Plan, surface soil samples will be collected from 0 to 0.5 feet below the surface. This is consistent with MDEQ Operational Memorandum #14, Revision 2 (June 6, 1998).

Page 11, Section 3.3: The soil borings in the foot prints of the former gas holders (GP-1 and MW-7) should be advanced until the bottom or foundation of the holder is encountered. Samples should be collected periodically as the boring is advanced, including one at the bottom, or foundation, of each holder. In addition, at least one boring should be advanced, and samples collected, at the location of the former tar well in order to characterize that structure. The borings inside the gas holder foundations probably will not need to be completed as monitor wells.

As stated earlier, test pits will be excavated at the two former gas holders locations and at the two former tar wells locations. Therefore, soil borings will not be advanced at these areas.

Page 11, Section 3.3.1: Should provide the name and qualifications of the contractor doing the work in the final Work Plan.

The name and qualifications of the contractors implementing the environmental assessment work scope will be provided to the U.S. EPA in a separate letter after the start date for the environmental assessment has been set. The start date is partially dependent upon the U.S. EPA's approval of the work plan.

Page 12, Section 3.4: Should provide the names and qualifications of the contractor doing the work in the final Work plan. If one has not been determined by the final Work Plan, State in Section 3.2 that a laboratory will be chosen which has QA/QC procedures in accordance with EPA guidelines and has demonstrated satisfactory performance.

See response to the previous comment. Section 3.2 of the Draft Work Plan states "A laboratory will be used for soil and groundwater analyses that participates in a QA/QC program that complies with U.S. EPA guidance". In the enclosed Revised Draft Work Plan, "and has demonstrated satisfactory performance" has been added.

Page 13, Section 3.4: May want to perform a few sieve analyses for additional site specific criteria.

Sieve analyses may be conducted in the future if necessary.

Page 13, Section 3.5: Why are 1" or 1.5" diameter wells going to be installed? The MDEQ has a preference for 2" diameter wells. What slot screen and size sand pack will be used? How will they be determined?

The Revised Work Plan states that 1.0-inch, 1.5-inch or 2.0-inch diameter wells will be installed with a Geoprobe. Recent upgrades to the Geoprobe equipment may allow the installation of 2.0-inch diameter wells using a Geoprobe. The MDEQ has approved the use of 1.0-inch or 1.5-inch diameter wells. Therefore, 1.0-inch or 1.5-inch diameter wells were specified in the Draft Work Plan. Section 3.5 of the Revised Work Plan states: "The annular space around the well screen (0.010-inch slot size) will be filled with silica sand (Global Filter Pack #7; 90% retainage = 0.0188 inches) and a bentonite seal will be placed directly above the sandpack. This type of well screen and sandpack are typical for monitoring wells

installed in the Site area".

Page 13, Section 3.5: The gas holder foundations and other MGP structures, like the tar well, may have extended through the clay layer and may have released contaminants to deeper geologic/hydrogeologic formations. The environmental assessment in support of the EE/CA must investigate and evaluate this possibility.

As stated earlier, the locations of the former gas holders and former tar wells will be investigated with test pits. Section 3.4.1 of the Revised Work Plan states that two borings will be advanced with the Geoprobe, if possible, to 30 feet below the surface to investigate the vertical extent of the clay.

Page 14, Section 3.6: Shouldn't PCBs be analyzed in a couple of wells? May have migrated from the surface. Also, will help evaluate potential contaminants related to past activities nat associated with MGP operations.

As discussed in Section 3.6 of the Revised Draft Work Plan, four groundwater samples will be analyzed for PCBs.

FIGURES ***In Figure 5, there is no location or mention of the location for S4-0***

Sample S4-0 was collected at boring S-4 at 0 feet below the surface. Boring S-4 is shown in Figure 5 of the Draft Work Plan (this figure is now Figure 6 in the Revised Draft Work Plan).

TABLES ***What are TP-1, TP-2, TP-3 under Area Samples in Table 4? Please clarify and show on Figure 5.***

Samples TP-1, TP-2 and TP-3 were soil samples that were to be collected from Geoprobe borings advanced at and around three (3) areas identified as having surface soils with blue discoloration. Since the exact locations of these samples were to be determined in the field based on visual observations of 'worse case' contamination, these locations were not shown on Figure 5 of the Draft Work Plan. As indicated in Section 3.3 of the Revised Draft Work Plan, test pits are proposed to be excavated at these three areas (identified as Location 1, Location 2 and Location 3 in the Revised Draft Work Plan). As stated in Section 3.3.2 of the Revised Draft Work Plan, samples will be collected for laboratory analysis from the test pits from visually-observed suspected MGP wastes and, if feasible, from the bottom and/or sidewalls of the test pits.

The last paragraph of E & E's October 6, 1998 memorandum addresses several issues. Responses to these issues are as follows:

- As stated in Section 3.4.1 of the Revised Work Plan, two borings will be advanced with the Geoprobe, if possible, to 30 feet below the surface to verify the presence of clay at that depth. Based on available information (drilling logs for industrial wells and knowledge of area geology), the clay in the area of the site is competent and very unlikely to produce sufficient water. Therefore, no deep monitoring wells are proposed to be installed. In addition, the test pit investigation will provide information whether contaminants from the former MGP structures, if present, have impacted deeper zones.

- A monitoring well to the east in the corner of the fence near Post Street will not be installed since

this property is outside of the boundaries of the former MGP and the property owners are not known.

- The presence of tar in the subsurface has not been established. The test pit investigation will provide information whether or not tar is present and the extent of the tar, if present.

HEALTH AND SAFETY PLAN

Responses to E & E's comments (written in bold italics) on the July 17, 1998 *Draft Health and Safety Plan* are presented below. The safety plan has been revised (subsequently referred to as the "Revised Draft Safety Plan") to address these comments and the revised plan is enclosed.

iv ***The name of the site safety officer should be provided for the final version of the HASP.***

The name of the site safety officer will be provided to the U.S. EPA before field work is conducted.

Page 2, Section 1.1: In the second paragraph, fourth line, "Which..." sentence is incomplete.

This sentence has been corrected in the Revised Draft Safety Plan.

Page 2, Section 1.1: In the second paragraph, fifth line, the word "scrap"is not complete.

This sentence has been corrected in the Revised Draft Safety Plan.

Page 2, Section 1.1: Provide more information regarding the past removal and assessment activities particularly contaminants found.

Additional information regarding past removal and assessment activities is included in Section 1.1 of the Revised Draft Safety Plan.

Page 4, Section 2.0: In Table 2 VOCs > 10 ppm requires upgrade to Level C except for benzene. Is benzene the only organic of concern with a low action level?

Yes. Benzene is the only organic of concern with a low action level.

Page 8, Section 2.0: In Table 2, what are the particulate levels based on? PCBs and metals were present during the removal.

OSHA's 8-hour Time-Weighted Average (TWA) for nuisance dust is 15 mg/M^3. Fluor Daniel GTI's safety policy is to set action levels that are more conservative than government-established levels. Therefore, the particulate action level was set at 2.5 mg/M^3.

The most conservative TWA for PCBs is 0.5 mg/M^3. At an action level of 2.5 mg/M^3, 20% of the soil dust (0.5/2.5) would have to consist of PCBs in order for this action level to be exceeded. Twenty percent is equivalent to a 20,000 mg/Kg concentration of PCBs. Since the U.S. EPA excavated all soils to less than 25 mg/Kg, the 2.5 mg/M^3 particulate action level is protective of potentially harmful PCB dust exposures. The same rationale can be applied to the metals to demonstrate that the particulate action level is protective of potentially harmful exposures to metals in airborne dust.

Page 9, Section 3.1: PID or FID? Will PID with 10.2 eV lamp monitor for all contaminants of concern?

Section 3.1 of the Revised Plan indicates that a PID with a 10.2 eV lamp will be used. This instrument will monitor MGP volatile contaminants and volatile contaminants detected in previous soils and groundwater samples (see Appendix N of the Revised Plan).

Page 10, Section 3.1: In Table 3, how was 10 ppm established as a level for upgrade? What are the particulate levels based on? PCBs and metals were present during the removal.

The OSHA TWA's for ethylbenzene, toluene and xylenes range from 50 ppm to 100 ppm. The TWA for benzene is 1 ppm. It is Fluor Daniel GTI's policy to set action levels that are more conservative than government levels. Therefore, a 10 ppm level for upgrade was established for all organic vapors, except benzene (action level = 0.5 ppm). A discussion on how the particulate levels were established is presented above.

Page 11, Section 3.1: The title of Table 4 is Hazard Summary, however, the title over the table is Air Monitoring Summary.

The title of Table 4 in the Revised Safety Plan is "Air Monitoring Summary".

Page 13, Section 3.1: Should add PCBs to Table 6.

PCBs have been added to Table 6 in the Revised Safety Plan.

Page 16, Section 3.2: Title of Table 7 should be Noise Monitoring Summary.

The title of Table 7 of the July 17, 1998 Safety Plan is "Noise Monitoring". This is a correct title. However, the title of Table 7 in the Revised Plan has been changed to "Noise Monitoring Summary".

Page 17, Section 4.1: Should add PCBs to Table 8.

PCBs have been added to Table 8 in the Revised Safety Plan.

Page 20, Section 4.3: In the guidelines for determining work zones, why isn't contaminated soil considered a factor in the guidelines?

Contamination is a factor in determining the guidelines for work zones. Section 4.3 states "Work zones will be established in order to: ..... "Contain contamination within the smallest area possible". *Contamination* does include contaminated soil.

Page 26, Section 6.0: End of second sentence, use the word "safely."

This correction has been made in the Revised Safety Plan.

Page 28, Section 6.1: Table 13 should provide the names of the people for site health safety officer, project supervisor and work team for the final version.

The names of the site safety officer, project supervisor and work team will be provided to the U.S. EPA before field work is conducted.

If you have any questions or comments on the above responses or the enclosed Revised Draft Work Plan and Revised Draft Safety Plan, please contact either Eric Lee of MichCon at (313) 256-5095 or myself at (248) 473-0720. MichCon is prepared to implement the environmental assessment according to the AOC upon receiving approval of the work plan from the U.S. EPA. Thank you for your assistance in this manner.

Sincerely;
Fluor Daniel GTI, Inc.

Daniel Strybel, CRG, PMP
Project Manger

enclosures

cc: Eric Lee, Michigan Consolidated Gas Company
Abed Housari, Michigan Consolidated Gas Company
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David Maurer, Pepper Hamilton LLP
Michael Anastasio, U.S. Environmental Protection Agency
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Ed Novak, Michigan Department of Environmental Quality